	Gas on Gas	Air on Air	Gas on Waste Gas	Air on Waste Gas
7= friction loss between port and valves, revised, kg per m^2 or mm of water. . . .	1.114	1.185	1.265	1.109
d— pressure to impress velocities	3 300	2 351	4 756	2 419
Valve resistance, 5= kg per m^2	4 201	2 317	6 216	4 781
Summation, kg per m^2 or mm of water . .	8.615	6.853	12.23	8.309
Chimney effect of checkerwork,	12	10	7	12
Chimney effect available for port	4 236	3 830		
Draft depression required at reversing valve			25.45 4	21.29 9

	Gas on Waste Gas	Air on Waste Gas
Revised figure for draft depression required at reversing	25.45 4	21.29 9
7= re vised frictional resistance in flue from valve, kg per m^2	0 228	0 107
5= velocity pressure required in flues from valves	0.760	0.730
Revised total draft depression required at point of junction of	26 442	22 136
$_T$= revised frictional resistance in flue to stack or boiler,	0 226	
8= velocity pressure required in stack flue, kg per rn^2 or rnm	1 . 520	
Total draft depression required at base of stack or boiler	28 . 188	

The port areas and velocities may now be fixed. In so doing, it should be borne in mind that the waste gases must pass out through the gas- and air-ports in proper proportions to supply the required amount of preheat. This is very rarely accomplished when chimney draft is depended upon, particularly when the gas